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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/536,927	03/27/2000	Andrew M. Hawryluk	3521.125(ALJ)	3973

7590 08/23/2002

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EXAMINER

THOMAS, TONIAE M

ART UNIT	PAPER NUMBER
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2822

DATE MAILED: 08/23/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/536,927

Applicant(s)

HAWRYLUK ET AL.

Examiner

Toniae M. Thomas

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-74 is/are pending in the application.
- 4a) Of the above claim(s) 26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 7, 14, 16-20, 22, 23, 53, 61, 63-66, 69, 71 and 72 is/are rejected.
- 7) ☒ Claim(s) 2-6, 8-13, 15, 21, 24, 25, 27-52, 54-60, 62, 67, 68, 70, 73 and 74 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Introduction

1. This Office action is an official response to the amendment received on 20 May 2002. Currently, claims 1-74 are pending. Claim 26 has been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a non-elected invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. *Claims 1, 7, 14, 16-20, 22, 23, 53, 61, 63-66, 69, 71, and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asakawa.¹*

As stated in the previous Office action mailed 03 December 2001, Asakawa discloses a method comprising a step of annealing at least one region of a semiconductor substrate with a pulsed beam of particles. Please refer to the paragraph in the previous action identified by Arabic numeral 4.

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Allowable Subject Matter

- ~~54-60~~
54-60
3. Claims 2-6, 8-13, 15, 21, 24, 25, 27-52, ~~54-57, 60~~, 62, 67, 68, 70, 73, and 74 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

4. Applicant's arguments filed 20 May 2002 have been fully considered but they are not persuasive.

The Applicant alleges that the Asakawa patent "relates to crystallization, or possibly recrystallization, but not to annealing or activation.... According to Applicant, *annealing* "includes 'activation', 'crystallization', or 'recrystallization' within its scope, and refers to raising and subsequently lowering the temperature of a relatively disordered semiconductor region either to crystallize such region to be integral with a crystalline semiconductor substrate..."(specification - page 5, lines 20-23). Furthermore, the Applicant admits that Asakawa discloses crystallization. Therefore, by Applicant's definition of annealing, Asakawa's crystallization is an annealing process.

The claim language does not recite an activation step. Therefore, the Applicant's argument regarding "activation" is irrelevant.

The Applicant further alleges that Asakawa makes no mention, or suggestion, as to the time duration that the disclosed process requires when exposing the silicon film.

¹ The Asakawa reference was relied upon in the previous action.

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As stated in the previous action, given the general process disclosed in the prior art, Asakawa, it would have been within the ability of one having ordinary skill in the art to discover the claimed time duration through routine experimentation. "Where general conditions of [a] claim are disclosed in prior art, it is not inventive to discover optimum or workable ranges by routine experimentation" (see *In re Aller, Lacey, and Hall* 105 USPQ 233 (CCPA 1955)).

The amendment received on 20 May 2002 has overcome the 35 U.S.C. 112, 2nd par. rejection as set forth in the action mailed on 03 December 2001. Accordingly, the rejection of claims 58 and 59 under 35 U.S.C. 112, 2nd par. is withdrawn.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toniae M. Thomas whose telephone number is (703) 305-7646. The examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead can be reached on (703) 308-4940. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

MMJ

August 12, 2002



Stephen D. Meier
Primary Examiner